

Development of Web-Based Learning Media Using Wordwall to Enhance Students' Learning Interest

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Abstract

This study explores the development of web-based learning media using Wordwall in Science subjects for elementary school students, specifically at SDN Jakasampurna IV, West Bekasi. The research aims to create engaging web-based games for third-grade students, focusing on the topic "Me and My Environment." The study employs the Research and Development (R&D) approach using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The validation process involved experts in material, media, and language. The results indicate that the developed media is highly feasible for implementation, with validation scores averaging 80% from material experts, 88% from media experts, and 80% from language experts. A trial involving 30 students showed an average practicality score of 86%, demonstrating the media's effectiveness in enhancing students' learning interest and understanding of the topic. In conclusion, Wordwall-based learning media is an effective tool for teaching elementary students about human digestive organs and their functions, but further trials are recommended to assess its overall impact.

Keywords: Natural Science and Social Science subjects, Research and Development (R&D), Web-based Wordwall

1 INTRODUCTION

The Merdeka Curriculum is a curriculum that emphasizes diverse and optimal intramural learning, allowing students sufficient time to delve into concepts and strengthen competencies. This curriculum promotes active, creative, and critical thinking among students. According to Barlian et al., the Merdeka Curriculum was created as a more flexible framework to focus on student-centered, independent learning that fosters active and creative engagement in developing students' talents and character. An optimal learning process in Science at the elementary level can provide opportunities for students to actively participate in learning through real activities, encouraging the development of scientific attitudes. Scientific attitudes are essential for individuals or academics when facing scientific issues. These attitudes must be nurtured in students to achieve comprehensive learning goals in Science, going beyond cognitive skill development to cultivate curiosity and innate learning abilities. Ideally, the current learning activities in the Merdeka Curriculum emphasize student participation. With the rapid development in education today, the educational system in Indonesia is evolving in terms of needs and growth at both national and local levels. For elementary education, adjustments are necessary in terms of media, models, and methods based on students' thinking stages. (Purba, A. O., Tarigan, B., Kembaren, G. B., Panjaitan, I. A., Simanjuntak, J. M. W., & Hanum 2021, Nugraheny, D. C., Syukrilah, Z., Haliza, F., & Zahroh, F. 2023; Vioeza et.al, 2023)

Improving educational quality requires teacher professionalism to create effective and efficient teaching processes. Teachers are expected to possess four competencies: professional, pedagogical, personal, and social, enabling them to teach and guide students effectively. Learning media can support student success when maintained and utilized well. Proper maintenance means not only storage but also continual use as a learning resource. Effective use can be applied through various engaging teaching methods suited to the material. (Isa, M.,

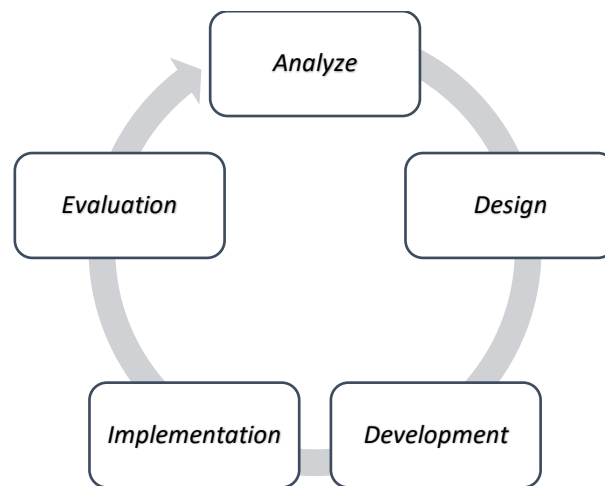
Neliwati, N., & Hadijaya, Y. 2024, Nurhayati, R., MoHa, L., & Fiidznillah, R. 2024; Dewi et.al., 2021; Hikmah et.al, 2023).

Based on field experience at SDN Jakasampurna IV, teachers often struggle to enhance student creativity, particularly in Science learning. Many teachers rely on traditional methods, and the lack of learning media contributes to student passivity, resulting in a formal and teacher-centered classroom atmosphere. (Matriano, E. A. 2020).

Developing learning media is crucial for educators. It must be continuously upgraded to align with technological advancements and educational needs. Furthermore, teachers frequently face challenges in selecting appropriate media for elementary students, with some lacking technological skills, hindering effective material transfer. To address the issues at SDN Jakasampurna IV, creativity must be fostered, utilizing available resources like laptops and smartphones for developing learning media. The researcher proposes a solution by creating web-based media using an application called Wordwall, which is designed to stimulate and assist students in understanding lessons. Wordwall offers various game templates that are user-friendly and supports teachers in creativity. Thus, the focus of this learning media development will be on the Wordwall website, which helps students explore the topic of "Me and My Environment." This modification of Science learning with Wordwall-based media aims to enhance student interest and engagement. (Rajaram, K. 2023, Vioreza, N. 2023, Laksono, D., Iriansyah, H. S., & Oktaviana, E. 2020)

2 RESEARCH METHODS

The method used in this research is the Research and Development (R&D) method with the ADDIE model. The product to be developed in this study is interactive learning media in the form of Wordwall games on the topic of "Me and My Environment." The ADDIE model consists of five stages: Analyze, Design, Development, Implementation, and Evaluation. In this research, the process is carried out up to the Evaluation stage, as the goal is to test the feasibility of this media as a learning tool to enhance student interest in the topic of "Me and My Environment." The feasibility or validity assessment in this study is conducted by an expert lecturer in material, media, and language. (Atmazaki et.al, 2023; Ranuharja, F., Ganefri, G., Fajri, B. R., Prasetya, F., & Samala, A. D. 2021, Adeoye, M. A., Wirawan, K. A. S. I., Pradnyani, M. S. S., & Septiarini, N. I. 2024)



3 RESULT AND DISCUSSION

3.1 Sub Results

From the research that has been conducted, the results regarding student interest in web-based Wordwall learning media for Science on the topic of "Me and My Environment" among third-grade students at SDN Jakasampurna IV Bekasi Barat. (Igir, G. P., Liando, N. V., & Andries, F. A. 2024)

3.2 Sub Pembahasan

The first stage is the Analysis stage. This stage involves analyzing the objectives of the material being developed and identifying the learning needs of students regarding the topic of "Me and My Environment" that will be studied.

The second stage is Design. In this stage, the material to be developed, which is "Me and My Environment," is determined, and the learning objectives to be achieved through the developed learning media are established.

The third stage is Development. In this stage, a validation test or feasibility assessment of the developed product is conducted. The validation test is performed to evaluate the product's feasibility, including its presentation and relevance to the material "Me and My Environment." This validation is carried out by two expert lecturers in content, media, language, and third-grade students.

The fourth stage is Implementation. This stage involves several trials of the web-based Wordwall that has been deemed suitable for testing based on expert validation assessments. The aim of this stage is to determine the practicality of the product through student responses and to evaluate its effectiveness through pretest and posttest results.

The fifth stage is Evaluation. The evaluation stage is the final step in the ADDIE model. This stage is conducted to obtain the final results of the Wordwall development carried out by the researcher to assess the practicality and effectiveness of the developed Wordwall. To determine the practicality of Wordwall, data from student response instruments regarding Wordwall is needed. The student response instruments include the feasibility of the Wordwall material, the presentation of Wordwall, and the linguistic appropriateness.

3.3 Table

In this study, validation was conducted by material experts and media experts to assess the feasibility of Wordwall-based teaching materials. The assessment was carried out using a Likert scale with predetermined aspects. The validation results are presented in the following tables.

Table 1: Results of Material Expert Validation Using a Likert Scale

Validator	Aspect	Score	Percentage	Criteria
Material expert 1	Contents	37	92%	Very Feasible
	Presentation	17	85%	
	Language	18	90%	
	Benefits	38	95%	
Average		27,5	91,6%	
Material expert 2	Contents	34	85%	Very Feasible
	Presentation	20	90%	
	Language	16	80%	
	Benefits	38	95%	
Average		26,5	95%	

To assess the feasibility of the teaching material from a media perspective, validation was conducted by media experts. The evaluation focused on aspects of Wordwall design and content, using a Likert scale. The results of the validation are presented in Table 2.

Table 2: Results of Media Expert Validation Using a Likert Scale

Validator	Aspect	Score	Percentage	Criteria
Media Expert 1	Wordwall Design	34	85%	Very Feasible
	Wordwall Contents	34	85%	
Average		34	85%	

Media Expert 2	Wordwall Design	32	80%	Very Feasible
	Wordwall Contents	34	85%	
Average		33	83%	

Based on the validation results by material experts, the average percentage obtained was 91.6% from the first validator and 95% from the second validator, which falls into the "Very Feasible" category. Meanwhile, the validation results by media experts indicate that the Wordwall design and content received an average of 85% from the first validator and 83% from the second validator, also classified as "Very Feasible." Thus, the teaching material has met feasibility standards in terms of both content and media.

4 CONCLUSION

This research has successfully developed Wordwall-based learning media for Science lessons on the topic "Me and My Environment." The media has been validated by experts in material, media, and language, with positive responses from both validators and users. Feedback from teachers and students confirms that the developed media is feasible, valid, and beneficial, making it easier for students to understand Science concepts and supporting teachers in delivering lessons. Therefore, the Wordwall-based learning media for the topic "Me and My Environment" at SDN Jakasampurna IV, West Bekasi, can be effectively used in teaching and learning activities. Further research is recommended to evaluate its long-term effectiveness in improving students' learning outcomes.

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